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Terms	Documents
l8 and (l4 or l3 or l2 or l1)	6

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Refine Search: `l8 and (l4 or l3 or l2 or l1)` Clear

Search History

Today's Date: 8/9/2001

DB Name	Query	Hit Count	Set Name
USPT,PGPB	l8 and (l4 or l3 or l2 or l1)	6	L9
USPT,PGPB	l7 and @ad<19970718	73	L8
USPT,PGPB	l6 and l5	90	L7
USPT,PGPB	purine$1 or nucleoside$1 or ADENOSINE$1 or GUANOSINE$1 or INOSINE$1 or XANTHOSINE$1	23246	L6
USPT,PGPB	fermen? and (e coli or escherichia coli)	602	L5
USPT,PGPB	(((435/252.8)!.CCLS.))	193	L4
USPT,PGPB	(((435/243)!.CCLS.))	845	L3
USPT,PGPB	(((435/88)!.CCLS.))	116	L2
USPT,PGPB	((435/87)!.CCLS.)	83	L1

Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 5643771 A

L9: Entry 1 of 6 File: USPT Jul 1, 1997

US-PAT-NO: 5643771
DOCUMENT-IDENTIFIER: US 5643771 A

TITLE: Non-reverting live bacterial vaccines

DATE-ISSUED: July 1, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stocker; Bruce Arnold D.	Portola Valley	CA	N/A	N/A

US-CL-CURRENT: 435/473; 424/184.1, 424/234.1, 424/240.1, 424/249.1, 424/258.1, 424/282.1, 424/93.1, 435/243, 435/245, 435/252, 435/252.1, 435/252.3, 435/252.4, 435/252.8, 435/253.1, 435/477, 435/71.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 5629171 A

L9: Entry 2 of 6 File: USPT May 13, 1997

US-PAT-NO: 5629171
DOCUMENT-IDENTIFIER: US 5629171 A

TITLE: Recombinant bioprocess for the preparation of 7-amino cephalosporanic acid (7-ACA)

DATE-ISSUED: May 13, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Conder; Michael J.	Harrisonburg	VA	N/A	N/A
Rambosek; John A.	Seattle	WA	N/A	N/A
McAda; Phyllis C.	Woodinville	WA	N/A	N/A
Reeves; Christopher D.	Woodinville	WA	N/A	N/A

US-CL-CURRENT: 435/47; 435/183, 435/230, 435/243, 435/252.3, 435/254.11, 435/254.5, 435/49, 435/51, 536/23.1, 536/23.2, 536/23.74

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

☐ 3. Document ID: US 5559005 A

L9: Entry 3 of 6 File: USPT Sep 24, 1996

US-PAT-NO: 5559005
DOCUMENT-IDENTIFIER: US 5559005 A

TITLE: Bioprocess for preparing 7-ACA and 7-ADAC

DATE-ISSUED: September 24, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Conder; Michael J.	Harrisonburg	VA	N/A	N/A
McAda; Phyllis C.	Woodinville	WA	N/A	N/A
Rambosek; John A.	Seattle	WA	N/A	N/A
Reeves; Christopher D.	Woodinville	WA	N/A	N/A

US-CL-CURRENT: 435/47; 435/183, 435/230, 435/243, 435/254.11, 435/254.5, 435/320.1, 435/49, 435/51, 536/23.1, 536/23.2, 536/23.74

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 4. Document ID: US 5468485 A

L9: Entry 4 of 6 File: USPT Nov 21, 1995

US-PAT-NO: 5468485
DOCUMENT-IDENTIFIER: US 5468485 A

TITLE: Avirulent microbes and uses therefor

DATE-ISSUED: November 21, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Curtiss, III; Roy	St. Louis	MO	N/A	N/A

US-CL-CURRENT: 424/184.1; 424/200.1, 424/93.1, 424/93.2, 435/252.3, 435/252.33, 435/252.8, 435/69.1, 435/71.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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☐ 5. Document ID: US 4960696 A

L9: Entry 5 of 6 File: USPT Oct 2, 1990

US-PAT-NO: 4960696
DOCUMENT-IDENTIFIER: US 4960696 A

TITLE: Process for producing physiololgically active substance by multienzyme process

DATE-ISSUED: October 2, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Imahori; Kazutomo	Kakinokisaka, Meguro-ku, Tokyo	N/A	N/A	JPX
Kondo; Hitoshi	Kyoto	N/A	N/A	JPX
Nakajima; Hiroshi	Kyoto	N/A	N/A	JPX
Iwasaki; Tatsuo	Kyoto	N/A	N/A	JPX

US-CL-CURRENT: 435/42; 435/109, 435/194, 435/41, 435/68.1, 435/88, 435/89, 435/90, 435/91.52, 435/92, 435/94

Full | Title | Citation | Front | Review | Classification | Date | Reference

KWIC | Draw Desc | Image

☐ 6. Document ID: US 4882276 A

L9: Entry 6 of 6 File: USPT Nov 21, 1989

US-PAT-NO: 4882276
DOCUMENT-IDENTIFIER: US 4882276 A

TITLE: Process for producing physiologically active substance by multienzyme process

DATE-ISSUED: November 21, 1989

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Imahori; Kazutomo	Tokyo	N/A	N/A	JPX
Kondo; Hitoshi	Kyoto	N/A	N/A	JPX
Nakajima; Hiroshi	Kyoto	N/A	N/A	JPX
Iwasaki; Tatsuo	Kyoto	N/A	N/A	JPX

US-CL-CURRENT: 435/89; 435/3, 435/813, 435/88, 435/92

Full | Title | Citation | Front | Review | Classification | Date | Reference

KWIC | Draw Desc | Image

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Terms	Documents
l8 and (l4 or l3 or l2 or l1)	6

Display 10 Documents, starting with Document: 6

Display Format: TI Change Format

=> d ibib ab 1

L14 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:757553 CAPLUS
DOCUMENT NUMBER: 136:50803
TITLE: Similarity of the Escherichia coli proteome upon completion of different biopharmaceutical **fermentation** processes
AUTHOR(S): Champion, Kathleen M.; Nishihara, Julie C.; Joly, John C.; Arnott, David
CORPORATE SOURCE: Department of Analytical Chemistry, Genentech, South San Francisco, CA, 94080, USA
SOURCE: Proteomics (2001), 1(9), 1133-1148
Published in: Electrophoresis, 22(16)
CODEN: PROTC7; ISSN: 1615-9853
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A comprehensive view of the physiol. state of E. coli cells at the completion of **fermn**. processes for biopharmaceutical prodn. was attained via 2-dimensional gel electrophoretic anal. of cellular proteins. For high cell d. **fermns**. in which phosphate is depleted to induce recombinant protein expression from the alk. phosphatase promoter, proteome anal. confirms that phosphate limitation occurs. Known phosphate starvation inducible proteins are obsd. at high levels; these include the periplasmic phosphate binding protein and the periplasmic phosphonate binding protein. The phn (EcoK) locus of these E. coli K-12 strains remains cryptic, as demonstrated by failure to grow with phosphonate as the sole P source. Proteome anal. also provided evidence that cells utilize alternative C and energy sources during these **fermn**. processes. To address regulatory issues in the biopharmaceutical industry, comparative electrophoretic analyses were conducted on a qual. basis for 4 different **fermn**. processes. Using this approach, the protein profiles for these processes were found to be highly similar, with the vast majority (85-90%) of proteins detected in all profiles. The obsd. similarity in proteomes suggests that multiproduct host cell protein immunoassays are a feasible means of quantifying host-derived polypeptides from a variety of biopharmaceutical **fermn**. processes.
REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib ab 2

L14 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:457219 CAPLUS
DOCUMENT NUMBER: 133:88295
TITLE: Bacteria expressing foreign genes for uridine phosphorylase and purine nucleoside phosphorylase for production of natural nucleosides and their analogs
INVENTOR(S): Bestetti, Giuseppina; Cali', Simona; Ghisotti, Daniela; Orsini, Gaetano; Tonon, Giancarlo; Zuffi, Gabriele
PATENT ASSIGNEE(S): Norpharma Spa, Italy
SOURCE: PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000039307	A2	20000706	WO 1999-EP10416	19991223
WO 2000039307	A3	20001109		

W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD,

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO,
RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU,
ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

IT 1304500	B1	20010319	IT 1998-MI2792	19981223
EP 1141328	A2	20011010	EP 1999-965565	19991223

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: IT 1998-MI2792 A 19981223
WO 1999-EP10416 W 19991223

AB Transgenic bacteria carrying high-level expression vectors for uridine phosphorylase (UdP) and purine nucleoside phosphorylase (PNP) are described for use in the manuf. of nucleosides and nucleosides. The intact cells, crude exts., or purified enzymes can be used to catalyze transglycosylation reactions between a donor nucleoside and an acceptor base with particularly high yields. The assocd. plasmid vectors are also described. Use of cell pastes to prep. ribavirin and adenine arabinoside by transglycosylation is demonstrated. Conversion efficiencies of >80% (for ribavirin) and >65% (for adenine arabinoside) were obtained.

=> d ibib ab 3

L14 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:316776 CAPLUS
DOCUMENT NUMBER: 132:344082
TITLE: The preparation of recombinant Escherichia coli for manufacturing xanthosine
INVENTOR(S): Matsui, Hiroshi; Kawasaki, Hisashi; Shimaoka, Megumi; Takenaka, Yasuhiro; Yamamoto, Yoko; Kurahashi, Osamu
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000135078	A2	20000516	JP 1998-308795	19981029

AB Recombinant E. coli deficient in xanthosine phosphorylase and GMP synthetase are prepd. to promote manuf. of xanthosine (I) by the E. coli. The two enzymes described above are responsible for conversion of I to xanthine and decrease of the prodn. of I. Other enzymes assocd. with exhaustion of I such as succinyl-AMP synthase are inactivated to further enhance the prodn. of I. Purine repressor function is also inactivated to enhance the prodn. of I. Prepn. of inactivated enzyme gene using known methods such as recombinant PCR recombinant E. coli deficient in xanthosine phosphorylase and GMP synthetase, and enhanced manuf. of I with the recombinant E. coli were shown.

=> d ibib ab 4

L14 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:513604 CAPLUS
DOCUMENT NUMBER: 105:113604
TITLE: Manufacture of ribofuranosylemimycin or deoxyribofluranosylenimycin
INVENTOR(S): Kobayashi, Hisato; Nakamya, Mitsuaki; Hirose, Yoshiteru
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60239495	A2	19851128	JP 1984-94819	19840511

OTHER SOURCE(S): CASREACT 105:113604

AB Emimycin derivs. I (Z = H or OH) are produced by the incubation of: (1) emimycin with ribose 1-phosphate, or ribose 1-phosphate-producing donors in the presence of nucleoside phosphorylase, and (2) emimycin with deoxyribose 1-phosphate, on deoxyribose 1-phosphate-producing donors in the presence of nucleoside phosphorylase at 40-70.degree.. Thus, uridine phosphorylase and **purine nucleoside** phosphorylase-producing **Escherichia coli** ATCC10798 was cultured in a medium contg. yeast ext. 0.5, peptone 1.0, meat ext. 1.0 and NaCl 0.5 g/dL at 30.degree. for 24 h, and the cells were collected and suspended in 0.05 M phosphate buffer (pH 7.0). The cells were incubated with a mixt. contg. uridine 4.0, emimycin 0.4 and potassium phosphate 0.8 g/dL at 60.degree. for 5 h. 1-.beta.-D-Ribofuranosylemimycin in the culture reached a concn. of 265 mg/dL.

=> d ibib ab 5

L14 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:166850 CAPLUS
DOCUMENT NUMBER: 104:166850
TITLE: Preparative synthesis of 9-.beta.-D-arabinofuranosyl adenine, an antiviral nucleoside by bacterial cells
AUTHOR(S): Eroshevskaya, L. A.; Barai, V. N.; Zinchenko, A. I.; Kvasyuk, E. I.; Mikhailopulo, I. A.
CORPORATE SOURCE: Inst. Microbiol., Minsk, USSR
SOURCE: Antibiot. Med. Biotekhnol. (1986), 31(3), 174-8
CODEN: AMBIEH
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB 9-.beta.-D-Arabinofuranosyl adenine (ara-A) [5536-17-4] was synthesized from cytosine arabinoside [147-94-4] by whole cells of **Escherichia coli**. Optimum conditions for biosynthesis were: K phosphate buffer (pH 6.7) 0.03M, cytosine arabinoside 0.03M, adenine 0.01M, pH 7.0, temp. 60-63.degree., 5% cell d., and incubation for 12 h. The yield of ara-A was 90-95% of the theor. yield. The 3 enzymes catalyzing ara-A synthesis were detected in cell-free exts.: **purine nucleoside** phosphorylase [9030-21-1], uridine phosphorylase [9030-22-2], and cytidine deaminase [9025-06-3].

=> d ibib ab 6

L14 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: **1969:95459** CAPLUS
DOCUMENT NUMBER: **70:95459**
TITLE: **Preparation** of nucleotides from **nucleosides** by bacteria
INVENTOR(S): Mitsugi, Koji; Okumura, Shinji; Katsuya, Noboru; Uemura, Akira
PATENT ASSIGNEE(S): Ajinomoto Co., Inc.
SOURCE: Jpn. Tokkyo Koho, 8 pp.
CODEN: JAXXAD
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 43028960	B4	19681212	JP	19631119

AB **H3PO4** esterification of nucleosides **is** carried **out** by addn. of microorganisms **or** their exts. to **reaction** systems contg. 1-methylinosine, adenine 1-N-oxide, 2-**aminopurine** riboside, 2,6-diaminopurine riboside, purine riboside, 6-methoxypurine riboside, 6-furfurylaminopurine riboside, 6-thiopurine riboside, 6-thioguanosine, 6-azaguanosine, 2',3'-O-isopropylideneinosine, 2',3'-O-isopropylideneguanosine, 5'-carboxyuridine, adenine 5'-acetate, adenine 5'-sulfate, 6-azauridine, 4- or 5-substituted uridine **derivs**., or nucleoside antibiotics. **The** applied microorganisms are **Pseudomonas** trifolii, P. perlurida, Serratia marcescens, Flavobacterium **harrisonii**, Achromobacter superficialis, A. liquidum, Staphylococcus citreus, Escherichia coli, Aerobacter aerogenes, Aeromonas punctata, Proteus mirabilis, and Salmonella typhimurium.

```
=> s phosphoribosyl pyrophosphate amidotransferase/cn
L1             1 PHOSPHORIBOSYL PYROPHOSPHATE AMIDOTRANSFERASE/CN

=> d

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   9031-82-7  REGISTRY
CN   Amidotransferase, phosphoribosyl pyrophosphate (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   .alpha.-5-Phosphoribosyl-1-pyrophosphate amidotransferase
CN   5'-Phosphoribosylpyrophosphate amidotransferase
CN   5-Phosphoribosyl-1-pyrophosphate amidotransferase
CN   5-Phosphoribosylpyrophosphate amidotransferase
CN   5-Phosphororibosyl-1-pyrophosphate amidotransferase
CN   Amidophosphoribosyltransferase
CN   E.C. 2.4.2.14
CN   Glutamine 5-phosphoribosylpyrophosphate amidotransferase
CN   Glutamine ribosylpyrophosphate 5-phosphate amidotransferase
CN   Glutamine-phosphoribosylpyrophosphate amidotransferase
CN   Phosphoribose pyrophosphate amidotransferase
CN   Phosphoribosyl pyrophosphate amidotransferase
CN   Phosphoribosylpyrophosphate glutamyl amidotransferase
CN   Phosphoribosylpyrophosphate transferase
CN   PRPP amidotransferase
MF   Unspecified
CI   MAN
LC   STN Files:   AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA,
       CAPLUS, EMBASE, TOXCENTER, TOXLIT, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
             372 REFERENCES IN FILE CA (1967 TO DATE)
               2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             372 REFERENCES IN FILE CAPLUS (1967 TO DATE)
```

NiceZyme View of ENZYME: EC 2.4.2.14

Official Name

Amidophosphoribosyltransferase.

Alternative Name(s)

Glutamine phosphoribosylpyrophosphate amidotransferase.
Phosphoribosyldiphosphate 5-amidotransferase.

Reaction catalysed

```
    5-phospho-beta-D-ribosylamine
 +  diphosphate
 +  L-glutamate
<=>
    L-glutamine
 +  5-phospho-alpha-D-ribose 1-diphosphate
 +  H(2)O
```

Cross-References

Biochemical Pathways; map number(s)	D2
PROSITE	PDOC00096 , PDOC00406
BRENDA	2.4.2.14
EMP/PUMA	2.4.2.14
WIT	2.4.2.14
KYOTO UNIVERSITY LIGAND CHEMICAL DATABASE	2.4.2.14
IUBMB Enzyme Nomenclature	2.4.2.14
MEDLINE	Find literature relating to 2.4.2.14
SWISS-PROT	O29388, PUR1_ARCFU; P00497, PUR1_BACSU; P28173, PUR1_CHICK; Q27601, PUR1_DROME; P00496, PUR1_ECOLI; P43854, PUR1_HAEIN; Q06203, PUR1_HUMAN; P35853, PUR1_LACCA; Q57657, PUR1_METJA; O26742, PUR1_METTH; Q50028, PUR1_MYCLE; O06626, PUR1_MYCTU; Q9L6B8, PUR1_PASMU; Q51342, PUR1_PSEAE; O57979, PUR1_PYRHO; P35433, PUR1_RAT ; P77935, PUR1_RHIET; Q12698, PUR1_SACKL; P41390, PUR1_SCHPO; P52418, PUR1_SOYBN; Q55038, PUR1_SYNP7; Q55621, PUR1_SYNY3; P52419, PUR1_VIGAC; P04046, PUR1_YEAST;

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```
=> s phosphoribosyl pyrophosphate synthetase/cn
L1             1 PHOSPHORIBOSYL PYROPHOSPHATE SYNTHETASE/CN

=> d

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   9015-83-2  REGISTRY
CN   Pyrophosphokinase, ribose phosphate (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   5-Phosphoribose pyrophosphorylase
CN   5-Phosphoribosyl 1-pyrophosphate synthetase
CN   5-Phosphoribosyl-.alpha.-1-pyrophosphate synthetase
CN   E.C. 2.7.6.1
CN   Phosphoribosyl diphosphate synthase
CN   Phosphoribosyl pyrophosphate kinase
CN   Phosphoribosyl pyrophosphate synthetase
CN   Phosphoribosyl-diphosphate synthetase
CN   Phosphoribosylpyrophosphate synthase
CN   PRPP synthase
CN   PRPP synthetase
CN   Pyrophosphorylribosylphosphate synthetase
CN   Ribophosphate pyrophosphokinase
CN   Ribose phosphate pyrophosphokinase
CN   Ribose-5-phosphate pyrophosphokinase
MF   Unspecified
CI   MAN
LC   STN Files:   AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
       CAPLUS, EMBASE, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
             447 REFERENCES IN FILE CA (1967 TO DATE)
               2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             447 REFERENCES IN FILE CAPLUS (1967 TO DATE)
```

NiceZyme View of ENZYME: EC 2.7.6.1

Official Name	
Ribose-phosphate pyrophosphokinase.	
Alternative Name(s)	
Ribose-phosphate diphosphokinase. Phosphoribosyl pyrophosphate synthetase. Phosphoribosyl diphosphate synthetase.	
Reaction catalysed	
ATP + D-ribose 5-phosphate <=> AMP + 5-phospho-alpha-D-ribose 1-diphosphate	
Comments	
• dATP can also act as donor.	
Human Genetic Disease(s)	
Gout (one form) with urate urolithiasis	MIM:311850
Cross-References	
Biochemical Pathways; map number(s)	C2, D2, H8, I8
PROSITE	PDOC00105
BRENDA	2.7.6.1
EMP/PUMA	2.7.6.1
WIT	2.7.6.1
KYOTO UNIVERSITY LIGAND CHEMICAL DATABASE	2.7.6.1
IUBMB Enzyme Nomenclature	2.7.6.1
MEDLINE	Find literature relating to 2.7.6.1
SWISS-PROT	Q42581, KPR1_ARATH; P46585, KPR1_CANAL; P09329, KPR1_HUMAN; P32895, KPR1_YEAST; Q42583, KPR2_ARATH; P11908, KPR2_HUMAN; P09330, KPR2_RAT ; P38620, KPR2_YEAST; O64888, KPR3_ARATH; P21108, KPR3_HUMAN; P38689, KPR3_YEAST; P38063, KPR4_YEAST; Q12265, KPR5_YEAST; P42816, KPRS_BACCL; P14193, KPRS_BACSU;

	P57266, KPRS_BUCAI; P08330, KPRS_ECOLI; P44328, KPRS_HAEIN; Q9ZLA1, KPRS_HELPJ; P56184, KPRS_HELPY; P47304, KPRS_MYCGE; P75044, KPRS_MYCPN; P15849, KPRS_SALTY; P41831, KPRS_SCHPO; Q59988, KPRS_SYNP7; Q55848, KPRS_SYNY3;

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If you would like to retrieve all the SWISS-PROT entries referenced in this entry, click here.

EC NUMBER COMMENTARY

2.7.6.1 -

RECOMMENDED NAME

Ribose-phosphate pyrophosphokinase

SYSTEMATIC NAME

ATP:D-ribose-5-phosphate pyrophosphotransferase

SYNONYMS	ORGANISM	COMMENTARY	LITERATURE
5-Phosphoribose pyrophosphorylase	-	-	-
5-Phosphoribosyl 1-pyrophosphate synthetase	-	-	-
5-Phosphoribosyl-1-pyrophosphate synthetase	-	-	-
5-Phosphoribosyl-alpha-1-pyrophosphate synthetase	-	-	-
Phosphoribosyl pyrophosphate synthetase	-	-	-
Phosphoribosyl-diphosphate synthetase	-	-	-
Phosphoribosylpyrophosphate synthase	-	-	-
Phosphoribosylpyrophosphate synthetase	-	-	-
PP-ribose P synthetase	-	-	-
PPRibP synthetase	-	-	-
PRPP synthase	-	-	-
PRPP synthetase	-	-	-
Pyrophosphokinase, ribose phosphate	-	-	-
Pyrophosphoribosylphosphate synthetase	-	-	-
Ribophosphate pyrophosphokinase	-	-	-
Ribose-5-phosphate pyrophosphokinase	-	-	-

CAS REGISTRY NUMBER	ORGANISM	COMMENTARY	LITERATURE
9015-83-2	-	-	-

L18 ANSWER 6 OF 9 PCTFULL COPYRIGHT 2001 MicroPatent
ACCESSION NUMBER: 1991009130 PCTFULL
TITLE (ENGLISH): **FERMENTATION** PROCESS FOR THE PRODUCTION OF PYRIMIDINE DEOXYRIBONUCLEOSIDES
TITLE (FRENCH): PROCEDE DE **FERMENTATION** POUR PRODUIRE DES DESOXYRIBONUCLEOSIDES DE PYRIMIDINE
INVENTOR(S): McDANDLISS, Russell, J.; ANDERSON, David, M.
PATENT ASSIGNEE(S): CHEMGEN CORPORATION
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9109130	**A1**	**19910627**

DESIGNATED STATES: AT AU BE CA CH DE DK ES FR GB GR IT JP KR LU NL SE
APPLICATION INFO.: WO 1990-US6993 19901205
PRIORITY (ORIGINAL): US 1989-448158 19891208
ABEN DNA coding for at least one enzyme that causes the accumulation of a pyrimidine deoxyribonucleoside is used, in conjunction with metabolic mutations or heterologous DNA coding for metabolic enzymes that also increase pyrimidine deoxyribonucleoside production, to engineer cultured cells to express a pyrimidine deoxyribonucleoside (PdN) in recoverable quantities, providing a commercially useful **fermentation** source for PdNs.

ABF On utilise le codage de l'ADN pour au moins un enzyme qui provoque l'accumulation d'un desoxyribonucleoside de pyrimidine, conjointement a des mutations metaboliques ou un codage d'ADN heterologue pour des enzymes metaboliques qui font egalement augmenter la production de desoxyribonucleoside de pyrimidine, pour mettre au point un desoxyribonucleoside de pyrimidine (PdN) en quantites que l'on puisse recuperer, ceci constituant alors une source de **fermentation** utile pour les desoxyribonucleosides de pyrimidine (PdNs) utilisable au niveau commercial.

TABLE 2: **PURINE** ANALOGS

31-0-Acetyl-21-Deoxyadenosine
31-0-Acetyl-21-Deoxycytidine
NI-Acetyl-21-Deoxycytidine
NI-Acetylguanine
2-kmino-6-Benzylmercaptopurine
2-kmino-6-Benzylthipurine
2-Amino-8-Bromo-6-Hydroxypurine
2-Amino-6(a-Carboxyethyl)-Mercaptopurine
2-kmino-6-Carboxymethyl-Mercaptopurine
2-kmino-6-Chloropurine
2-kmino-6-Chloropurine Riboside
6-Amino-2,8-Dihydioxypurine
8-Aminoguanosine
2-Amino-6-Mercaptopurine
6-Amino-2-Methylpurine
6-Amino-3-Methylpurine
2-Aminopurine
8-Azaxanthine

2,6-Dithiopurine
1,N'-Ethenoadenosine
6-Ethoxypurine
9-Ethyladenine
51-(N-ethyl)-Carboxamidoadenosine
9-Ethylguanine
6-Ethylmercaptopurine
6-n-Heptylmercaptopurine
6-n-Hexylaminapurine
6-Histaminopurine
Nl-(2-Hydroxyethyl)Adenosine
6-(#-Hydroxyethylamino)**Purine**
1-Hydroxy-iso-Guanine
2-Hydroxy-6-Mercaptopurine
6-Hydroxy-2-Mercaptopurine
2-Hydroxy-6-Methylpurine
6-Hydroxy-l-Methylpurine
2-Hydroxypurine
6-Hydroxypurine
2-Hydroxy-6-Thiopurine

6-Selenoguanosine
6-Selenoinosine
6-Selenopurine
6-Thioguanine
6-Thioguanosine
8-Thioguanosine
Thiohydroxypurine
2-Thioxanthine
6-Thioxanthine
2,6,8-Trichloro-7-Methylpurine
2,6,8-Trichloropurine
1,3,9-Trimethylxanthine
2,6,8-Trioxypurine

Mutations that affect inetabolic enzym activity. To achieve increased PdN production, metabolic mutation can also be introduced by transforming a PdN-producing cell of the present invention with a plasmid that confers increased or decreased enzyme activity. For example, a deo operon mutation can be introduced into a PdN-producing cell, such that the mutation inhibits the synthesis or activity of the enzyme thymidine phosphorylase (deoA), Which catalyzes the degradation of thymidine (e.g., see strain CNG 1004 of Example 9). Additionally, a uridine phosphorylase (udp) mutation can be introduced that lowers the amount or activity of uridine phosphorylase, thereby decreasing the degradation of thymidine or deoxyuridine which is a substrate for uridine phosphorylase (e.g., see strains CMG 1096 and CMG 1105 of Example 9). Also, a **phosphoglucose isomerase** (pgi) mutant -can be introduced that further increases PdN-production by shifting carbohydrate metabolism to the hexose monophosphate pathway, resulting in an increased level of ribose in the cell. In another embodiment of the present invention, a thymidine kinase- inhibiting mutation can be introduced that prevents the phosphorylation of thymidine to make TMP, thereby increasing the production of thymidine.

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=> s phosphoglucose isomerase/cn
L1            1 PHOSPHOGLUCOSE ISOMERASE/CN

=> d

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   9001-41-6  REGISTRY
CN   Isomerase, glucose phosphate (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   6-Phosphoglucose isomerase
CN   D-Glucose-6-phosphate isomerase
CN   E.C. 5.3.1.9
CN   Glucose 6-phosphate isomerase
CN   Glucose phosphate isomerase
CN   Glucose phosphoisomerase
CN   Hexose 6-phosphate isomerase
CN   Hexose isomerase
CN   Hexose phosphate isomerase
CN   Hexose phosphate mutase
CN   Hexosemonophosphate isomerase
CN   Oxoisomerase
CN   Phosphoglucoisomerase
CN   Phosphoglucose isomerase
CN   Phosphohexoisomerase
CN   Phosphohexomutase
CN   Phosphohexose isomerase
CN   Phosphosaccharomutase
MF   Unspecified
CI   MAN
LC   STN Files:   AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA,
       CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, IFICDB,
       IFIPAT, IFIUDB, MSDS-OHS, PROMT, TOXCENTER, USPAT2, USPATFULL
     Other Sources:   EINECS**, TSCA**
        (**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
            4359 REFERENCES IN FILE CA (1957 TO DATE)
              32 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            4361 REFERENCES IN FILE CAPLUS (1957 TO DATE)
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